

VILLAGE OF WHEELING

Small Wireless Facility Design, Stealth and Concealment Standards

The following design, stealth and concealment standards provide aesthetic requirements and standards that apply to the placement of all small wireless facilities installed within the public rights-of-way within the Village. Small Wireless Facilities are generally regulated by the Small Wireless Facilities Deployment Act (50 ILCS 840/1 et seq., by federal law, and Title 11, Chapter 11.12, “Construction of Utility Facilities in the Rights-of-Way and Title 11, Chapter 11.13, “Small Wireless Facilities” of the Village Code.

Every small wireless facility to be located within village rights-of-way shall comply with the following standards.

- A. General Standards for Small wireless facilities:
 1. The use of stealth technology in the location and construction of small wireless facilities is required whenever and wherever possible. Stealth technology means using the least visually and physically intrusive design and equipment that is not technologically or commercially impracticable under the facts and circumstances, to employ methods that blend into surroundings and not be visible; and to minimize adverse aesthetic and visual impacts on the right-of-way, property, building and/or other facilities adjacent to, surrounding and in generally the same area as the requested location of such small wireless facilities.
 2. Small wireless facilities, including but not limited to antennas, equipment enclosures, mounting brackets and hardware, mounting posts, cables, and shrouds, shall be of a color that is identical to the utility pole or of a neutral color compatible with the color of the utility pole and any surrounding elements so as to camouflage or conceal their appearance, create consistency among right-of-way infrastructure, and to make such small wireless facilities as unobtrusive as possible. The Director of Public Works/Director of Community Development or his or her designee may approve compatible color schemes for antennas and small wireless facilities. Anti-graffiti finishes shall be applied to all Small wireless facilities that may be reachable from ground level.
 3. Antennas shall be mounted no less than twelve (12) feet above ground level.
 4. Antennas shall, to the extent technically feasible, be designed and installed to appear hidden within the utility pole or to appear like an original part of the utility pole or wireless support structure.

5. Each antenna not hidden within a utility pole shall be located entirely within a shroud enclosure not more than six (6) cubic feet in volume that is capable of accepting paint to match the approved color of the small wireless facility.
6. Top-mounted antennas and their enclosures shall, unless an alternative designee is approved by the Director of Public Works/Director of Community Development or his or her designee, be mounted directly above the utility pole or wireless support structure, and shall not extend the diameter of the utility pole or wireless support structure at the level of the antenna attachment.
7. Side-mounted small wireless facility antennas within a shroud enclosure and side-mounted small wireless facility equipment enclosures shall be, if possible, flush mounted to the utility pole or wireless support structure at the level of the attachment. If not flush-mounted, metal flaps or “wings” shall extend from the enclosure to the utility pole or wireless support structure to conceal any gap between the between the small wireless facility and the utility pole or wireless support structure. The design of the flaps shall be integrated with the design of the small wireless facility and be the same color.
8. Mechanical equipment and devices shall be, to the extent technically feasible concealed underground or mounted within a concealment box designed as a decorative pole base. Where not technically feasible, small cell facilities or other devices may be mounted directly to the pole a minimum of eight (8) feet above ground level and screened by means of Village-approved banners or other approved concealment methods. Ground mounted mechanical equipment and devices shall only be allowed as provided in the Small Wireless Facilities Ordinance and may be required to be screened with landscaping.
9. In order to minimize visual impact, the wireless provider shall install the smallest suitable wireless facilities then in industry use, regardless of location, for the particular application.
10. Small wireless facilities located on street light poles or traffic control structures shall not block light emanating from the street light fixture or otherwise interfere with the purpose of the street light fixture or traffic control structure.
11. Small wireless facilities shall not be located in any area that interferes with traffic, driveways, or pedestrian travel.

12. Small wireless facilities must be located and oriented in a way as to minimize view blockage.
13. Small wireless facilities attached to poles, other than top-mounted antennas, shall be mounted on the side of the utility pole or wireless support structure at a 90 degree angle from the right-of-way and opposite the direction of vehicular traffic along the same side of the right-of-way.
14. Small wireless facilities attached to the utility pole or wireless support structure shall be attached using rigid steel clamping mounts or stainless steel banding to the exterior of any metal pole. All mounts and banding shall be of the same color as the utility pole or wireless support structure, except as otherwise approved by the Director of Public Works/Director of Community Development. Care should be taken to integrate the mounting elements into the small wireless facility design. Through-bolting or use of lag bolts on Village-owned utility poles is prohibited.
15. All wires or cables serving the small wireless facility, except where such wires or cables attach to the ports of the antenna, shall be located inside conduit and concealed within the hollow interior of the utility pole. If concealment is not technically feasible, flush mounted to an existing utility pole in an enclosed wire chase on which the facilities are collocated. For new utility poles or wireless support structures, all wires and cables serving the small wireless facility shall located inside conduit and concealed within the hollow interior of the utility pole or wireless support structure.
16. All small wireless facilities shall be installed in accordance with all applicable Village codes. No wiring or cabling shall interfere with any existing wiring or cabling installed by the Village, a utility or a wireless services provider.
17. No guy or other support wires will be used in connection with a small wireless facility unless the small wireless facility is to be attached to an existing utility pole or wireless support structure that incorporates guy wires prior to the date the applicant has applied for a permit.
18. Small wireless facilities shall not be artificially lighted or marked, except as required by law.
19. The small wireless facility, including the antenna, and all related equipment when attached to an existing or new utility pole or wireless support structure, must be designed to withstand a wind force and ice loads in accordance with the applicable standards established in Chapter 25 of the National Electric

Safety Code for utility poles, Rule 250-B and 250-C standards governing wind, ice, and loading forces on utility poles, in the American National Standards Institute (ANSI) in TIA/EIA Section 222-G established by the Telecommunications Industry Association (TIA) and the Electronics Industry Association (EIA) for steel wireless support structures and the applicable industry standard for other existing structures. For any small wireless facility attached to a Village-owned utility pole or, in the discretion of the Village, to a non Village-owned utility pole or wireless support structure, the operator of the small wireless facility must provide the Village with a structural evaluation of each specific location containing a recommendation that the proposed installation passes the standards described above. The evaluation must be prepared by a professional structural engineer licensed in the State of Illinois.

20. The Village will not authorize any attachments of small wireless facilities to a Village-owned utility pole that negatively impact the structural integrity of the pole. The Village may condition approval of the collocation on replacement or modification of the Village-owned utility pole if necessary to meet Village standards.
21. Small wireless facilities shall be located in a manner that meets the Americans with Disabilities Act of 1990 and that does not obstruct, impede or hinder the usual pedestrian or vehicular path of travel.
22. Small wireless facilities collocated on Village-owned utility poles may not use the same power or communication source providing power and/or communication for the existing infrastructure. The wireless provider shall coordinate, establish, maintain and pay for all power and communication connections with private utilities.
23. A four (4) inch by six (6) inch plate with the wireless provider's name, location identifying information, and emergency telephone number shall be permanently fixed to the small wireless facility equipment enclosure or shroud. Any manufacturer logos or decals on that may be visible to the public shall be removed or painted over.
24. Small wireless facility equipment not mounted on a utility pole or wireless support structure shall be installed underground. If undergrounding is not possible, landscaping shall be required to help mitigate the effects of the installation of any ground-mounted equipment.
25. Alternative measures for concealment may be proposed by the wireless provider and approved by the Director of Public Works or Director of

Community Development or his or her designee, if the Director of Public Works or Director of Community Development or his or her designee determines that the optional measures will be at least as effective in concealing the small wireless facilities as the measures required above.

26. Wireless providers shall comply with the design and construction standards that are generally applicable to utility installations in the public right-of-way, as required by the Village's Code of Ordinances, Title 11, Chapter 11.12, "Construction of Utility Facilities in the Rights-of-way", as well as these standards, any other written design standards for decorative utility poles, or reasonable stealth, concealment, and aesthetic requirements that are otherwise identified by the Village in an ordinance, written policy adopted by the Village Board of Trustees, in the Village's comprehensive plan, or in another written design plan that applies to other occupiers of the rights-of-way, including on a historic landmark or in a historic district.

B. Replacement of Existing Street Light Poles

The following standards apply when replacing an existing street light pole with a combination small wireless facility and street light pole. Such replacements should only be located where an existing street light pole can be removed and replaced, or at a new location where it has been identified that a street light is necessary. All such replacements shall meet the following standards:

1. All replacement street light poles shall be the same design, material, and color as the replaced existing street light pole and other poles within the immediate area, unless an alternative design is approved by the Director of Public Works or Director of Community Development or his or her designee.
2. All replacement street light poles and pole foundations shall conform to the Village's standards and specifications for street light design and construction.
3. Replacement street light poles shall be placed in the same location as the original pole, or upon approval, at an equal distance from other street light poles within the same right of way based upon the average distance between existing street light poles within the designated area.
4. Street light poles shall be designed and engineered to support a luminaire and mast arm of length equal to that of the existing pole to be replaced or of a length approved by the Director of Public Works or Director of

Community Development or his or her designee based upon the location of the replacement street light pole.

5. All luminaires and mast arms shall match the arc and style of the original luminaire and mast arm, unless otherwise approved by the Director of Public Works or Director of Community Development or his or her designee.
6. The replacement luminaire and mast arm shall be at the same height above the ground as the existing luminaire and mast arm.
7. All replacement street light poles shall have new light fixtures of the same manufacturer, model and light output as the removed fixture and nearby light fixtures, or as otherwise approved by the Director of Public Works or Director of Community Development or his or her designee.
8. Replacement street light poles shall have a five (5) year manufacturer's replacement warranty.
9. Replacement street light poles shall meet American Association of State Highway and Transportation Officials structural guidelines for roadway applications and the American National Standards Institute requirements for vibrations.
10. Street light pole height shall be measured from the ground to the top of the street light pole.
11. All replacement street light pole heights shall be consistent with those of existing street lights.
12. The small wireless facility components shall be sized appropriately to the scale of the street light pole.
13. A decorative transition shall be installed over the equipment enclosure upper bolts, or a decorative base cover shall be installed to match the equipment enclosure size. All hardware connections shall be hidden from view. Each street light pole component shall be architecturally compatible to create a cohesive aesthetic.
14. Replacement street light poles shall continue to be owned by the Village.

C. Installation of new wireless support structures, where allowed.

1. There is a Village preference for new wireless support structures to function as a street light as well, where deemed to be advisable by the Director of Public Works or Director of Community Development or his or her designee

at a particular location, or to have the ability to be modified for street light use at the Village's discretion.

2. A new wireless support structure shall be designed to minimize the visual and aesthetic impact of the new vertical element and associated small wireless facilities upon the surrounding area and shall blend in with the surrounding streetscape with minimal visual impact. The Village may require a new wireless support structure to be constructed of a specific material that will enhance the stealth and concealment of the structure.
3. New wireless support structures shall match the design, type, material and color of existing utility poles, including street light poles, within the immediate area, except as otherwise approved by the Director of Public Works or Director of Community Development or his or her designee.
4. Within residentially zoned areas, new wireless support structure installations shall be located where the shared property line between two residential parcels intersects the right-of-way whenever possible, unless an unsafe condition, cluttered appearance, or other violation of these standards will result.
5. New wireless support structures shall be equal distance from other utility poles based upon the average distance between existing utility poles within the designated area. If a new wireless support structure cannot be located the average distance from other utility poles, a new wireless support structure may be approved if such wireless support structure is designed as a stealth pole.
6. The centerline of a new wireless support structure shall be in alignment with existing utility poles where present, or with street or parkway trees along the same side of the right-of-way.
7. Unless otherwise approved by the Director of Public Works or Director of Community Development or his or her designee, new wireless support structures shall be located a minimum of twelve (12) feet from driveway aprons, a minimum of five (5) feet from existing underground utility pipes owned by the Village, including but not limited to sanitary sewer, storm sewer and water main installations, and a minimum of ten (10) feet from other utility structures and appurtenances (fire hydrants, manholes, valves, etc.).

8. New wireless support structures shall be sited outside the critical root zone of existing trees having a three (3) inch diameter at breast height located in the immediate vicinity.
9. The outside diameter of any new wireless support structure shall not exceed the diameter of existing utility poles located within 300 feet of the location of the new wireless support structure.
10. New wireless support structures, inclusive of any antenna attachment, shall not exceed the heights as authorized by Chapter 11.13.080 of the Village Code.
11. New wireless support structures shall be round in shape with a smooth pole shaft.
12. New wireless support structures incorporating pole-mounted small wireless facilities shall be tapered in diameter from the base to the top, with a maximum diameter of twelve (12) inches at the base and a maximum diameter of eight (8) inches at the top, unless an alternative design is approved by the Director of Public Works or Director of Community Development or his or her designee. Incorporation of equipment within an equipment enclosure in the base or other portion of the structure is preferred.
13. New wireless support structures incorporating small wireless facilities in an equipment enclosure within a base may utilize poles tapered in diameter or poles having a consistent outside diameter, unless an alternative design is approved by the Director of Public Works or Director of Community Development or his or her designee.
14. All new wireless support structures must be supported with a reinforced concrete foundation designed, stamped, sealed and signed by a professional engineer licensed and registered in the State of Illinois, and subject to the approval of the Director of Public Works or Director of Community Development or his or her designee.
15. All anchor bolts must be concealed from public view, with an appropriate pole boot or cover powder-coated to match the wireless support structure color.
16. If multiple requests are received to install two (2) or more wireless support structures in approximately the same location, in a manner that would violate these requirements or other Village requirements, the Village shall resolve

such conflict through whatever reasonable and nondiscriminatory manner it deems appropriate.

D. Historic Districts and Landmarks: For areas designated as historic districts, or on buildings or structures designated as historic landmarks, in addition to the stealth, concealment and design requirements referenced above, the following additional restrictions/conditions apply to the installation of small wireless facilities:

1. Small wireless facilities and wireless support structures shall be comprised of materials that are consistent with the surrounding elements so as to blend architecturally with any buildings or structures designated as historic landmarks or located within a designated historic district, and shall be designed to blend with the surrounding historical landmarks and/or district in design and color.
2. No ground-mounted equipment enclosures shall be permitted within a designated historic district except as approved by the Village as stealth installations.
3. Small wireless facilities shall not be mounted upon Village-owned ornamental street lights except in cases where the equipment enclosure is concealed within the base of the ornamental street light, and the antenna and its related shroud is incorporated in a seamless enclosure on the top of the ornamental street light, pursuant to these design standards and as approved by the Director of Public Works or Director of Community Development or his or her designee.